

# Work Order ID 116830

April-24-14 7:49:29 AM

647.0111  
B116830  
REV. A1

\*116830\*

Page 1

Item ID: 647.0111

Revision ID:

Item Name: Panel

Start Date: 4/23/14

Start Qty: 12.00

\*12\*

Required Date: 4/23/14

Req'd Qty: 12.00

\*12\*

Reference:

Approvals:

Process Plan:

MLJ

Date: 14-04-25

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

\*NR1\*

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

647.0100

A1

110

0.00

\*110\*

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg

Dwg Rev: A1

Prog Rev: A1

2-Deburr if necessary

120

QC2- Inspect parts off machine FAI/FAIB

0.00

\*120\*

QC

Memo

0.00

Quality Control

15 0 Jm15-3-24

15 0 Jm15-3-24

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

April-24-14 7:49:29 AM

Page 2

## Packaging

15

**38**  
**9-89**

MAR 25 2015

CL 15/03/27 15

15\* SP15-04-14

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other<br><br>_____<br>_____<br>_____ |
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April-24-14 7:49:29 AM

Page 3

| Sequence ID/<br>Work Center ID | Operation<br>Description                                    | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp             |
|--------------------------------|-------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------------------|
| 160                            | QC5- Inspect part completeness to step on W/O               | 0.00                 |         |        |              |               |               |                  | DAS<br>38<br>9-89          |
| <b>*160*</b>                   |                                                             |                      |         |        |              |               |               |                  |                            |
| QC                             | Memo                                                        | 0.00                 |         |        |              | 15            |               |                  |                            |
| Quality Control                |                                                             |                      |         |        |              |               |               |                  | APR 14 2015                |
| 190                            | Identify as per dwg & Stock Location: <u>ck088</u>          | 0.00                 |         |        |              |               |               |                  | DAS<br>27<br>9-89          |
| <b>*190*</b>                   |                                                             |                      |         |        |              |               |               |                  |                            |
| Packaging                      | Memo                                                        | 0.00                 |         |        |              | 15            |               |                  |                            |
| Packaging                      | ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV*** |                      |         |        |              |               |               |                  | APR 15 2015                |
| 200                            | QC21- Final Inspection - Work Order Release                 | 0.00                 |         |        |              |               |               |                  |                            |
| <b>*200*</b>                   |                                                             |                      |         |        |              |               |               |                  |                            |
| QC                             | Memo                                                        | 0.00                 |         |        |              |               |               |                  |                            |
| Quality Control                |                                                             |                      |         |        |              |               |               |                  | MLJ 1504-16<br>MLJ 1504-16 |

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%; border: none;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other<br><br>_____<br>_____<br>_____ |
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# Picklist Print

April-24-14 7:49:34 AM

Page 1

Work Order ID: 116830

**\*116830\***

Parent Item: 647.0111

**\*647 0111\***

Parent Item Name: Panel

Start Date: 4/23/14

Required Date: 4/23/14

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP REV:A 12.08.14 NEW ISSUE DD VERF:JFS

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty        | Qty<br>Issued | Date<br>Issued    | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|---------------------|---------------|-------------------|--------|
| M2024T3S.063                    |                        | Purchased     |             | No                  |                  | 110             | sf                 | 301.4339       | 1.0988      | <del>13.87958</del> |               |                   |        |
| <b>*M2024T3S 063*</b>           |                        |               |             |                     |                  |                 |                    |                | <b>**</b>   | <b>(20)</b>         |               | <b>Jn 15-3-24</b> |        |
| 2024-T3 .063 sheet              |                        |               |             |                     |                  |                 |                    |                |             |                     |               |                   |        |

Location

Loc Qty

Loc Code

MAT022

301.4339

123701

16.1039

m127866

94.33

m128354

191

**130000**

**130000.**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

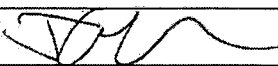
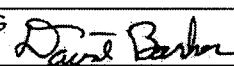
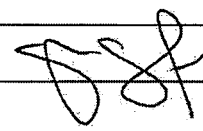
Work Order update only ☐

|                                                              |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
|--------------------------------------------------------------|------|------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|--------------|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |      |      |     | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |             |              |              |  |  |
| Root Cause                                                   | Date | Step | Qty | Description of work order update or non-conformance                                                                                                                                | Initial Chief Eng | Action Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sign & Date | Verification | QC Inspector |  |  |
| Design                                                       |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Doc/Data                                                     |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Equip/Tooling                                                |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Handling/Pre                                                 |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Material                                                     |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Operator                                                     |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Offset/Setup                                                 |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Process                                                      |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Supplier                                                     |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Training                                                     |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Transport                                                    |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Unapproved                                                   |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |

| FAULT CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other<br><br>_____<br>_____<br>_____ |





|                                                                                                      |                                     |                                                                                          |                                                                                        |                 |                                                                                           |
|------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------|
| <b>APICAL</b><br><br>INDUSTRIES, INC.                                                                | ENGINEERING CHANGE NOTICE NO. 03985 |                                                                                          |                                                                                        | SHEET 1 OF 2    |                                                                                           |
|                                                                                                      | DWG NO. 647.0100                    | REV: A                                                                                   | PREPARED BY J. BECKER                                                                  | DATE: 7/15/13   | EFFECT ON DWG<br><input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC. |
|                                                                                                      | DWG TITLE: SHEET METAL              |                                                                                          |                                                                                        |                 |                                                                                           |
| APPROVED BY: ENGR.  |                                     | MFG.  | QC  | EFF. NEXT ORDER |                                                                                           |
| TRANSACTION CODES (TC):<br>A-ADD C-CREATE<br>R-REVISE D-DELETE                                       |                                     | REASON: REVISED NOTE 2. ADDED 647.0117                                                   |                                                                                        |                 |                                                                                           |

IS

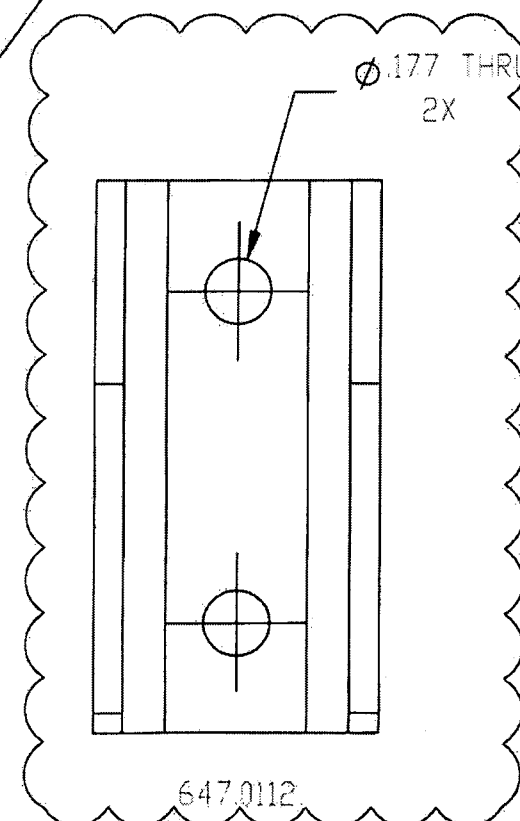
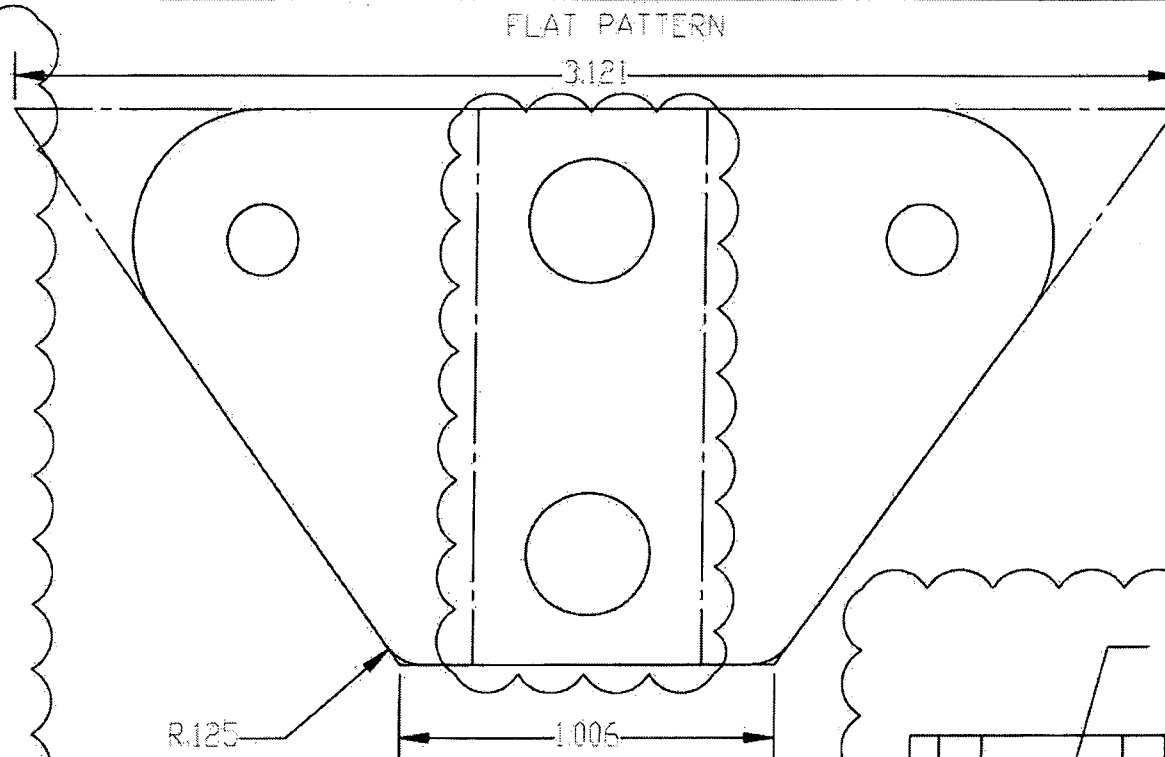
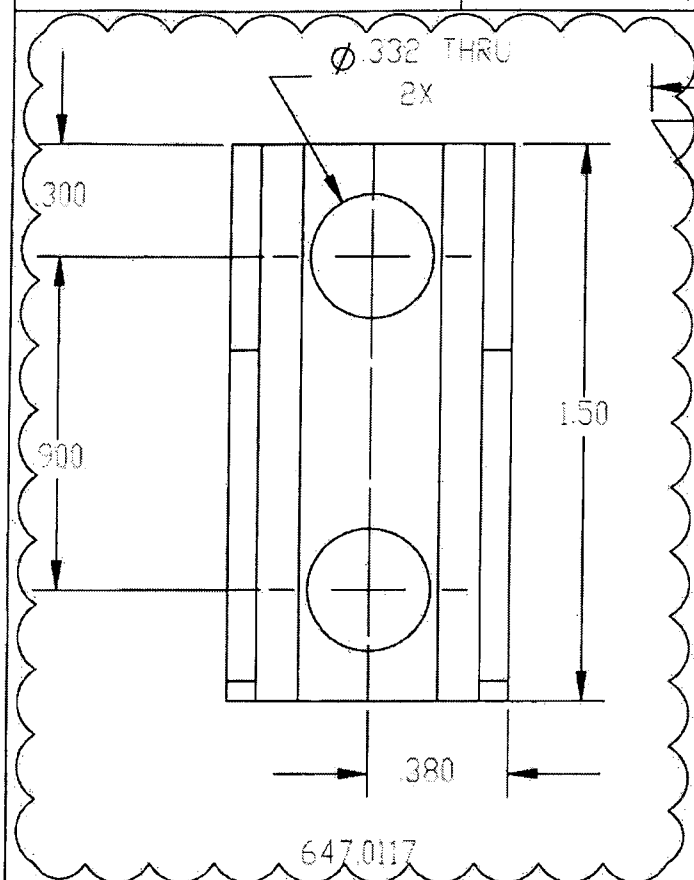
NOTES:

- 1 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.
- 2 FINISH: IAW MPP-172 ANODIZE IAW SECTION 2.1, PRETREATMENT IAW SECTION 3.1 AND PRIMER IAW SECTION 4.1.
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 MATERIAL: 304 SS IAW AMS 5643.
- 6 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N.
- 7 OTHER DIMENSIONS SAME AS 647.0112.

116830 MLS  
14-04-25

**SHEET 1, ZONE D1 IS:**

|                                                                                                                                                                   |    |             |  |                                                                          |                                                                     |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------|--|--------------------------------------------------------------------------|---------------------------------------------------------------------|---------------|
|                                                                                                                                                                   | C  | 647.0117    |  | STRUT BRACKET                                                            | △                                                                   | △             |
| F/N                                                                                                                                                               | TC | PART NUMBER |  | DESCRIPTION                                                              | MATERIAL                                                            | SPECIFICATION |
| DOCUMENTS EFFECTED:                                                                                                                                               |    |             |  | CHANGE CATEGORY                                                          | DER REVIEW REQUIRED                                                 |               |
| <input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUCTIONS <input type="checkbox"/> ICA <input type="checkbox"/> FMS <input type="checkbox"/> BOM |    |             |  | <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR | <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO |               |



**SHEET 3, ZONE B2-4 IS:**

1 2 3 4 5 6 7 8

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REV. DESCRIPTION DATE APPROVED  
LAST PROTOTYPE REVISION: PPS  
N/C INITIAL RELEASE 03/28/09 P. BRAYO  
A. INCORPORATED ECN 02722, 00964, 00089 04/28/11 P. BRAYO

25.37  
21.94  
2.28 2PL  
3.16 2PL  
74.500° 2PL  
78.000° 2PL  
R7.25 2PL  
R9.00 2PL  
14.00 2PL  
5.20  
R.31 6PL  
20.00  
14.20 2PL  
12.69 2PL  
79.151° 2PL  
0.063

UNINCORPORATED ECN(S)  
03985

NOTES:  
1. MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.  
2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; PRETREAT PR-148 ADHESION PROMOTER; PRIME IAW MIL-P-23377J TYPE I CLASS N.  
3. DEBURR AND BREAK ALL SHARP EDGES.  
4. IDENTIFY IAW MPP-120.  
5. MATERIAL: 304 SS IAW AMS 5643.  
6. FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N.

647.0110

647.0116 DOUBLER  
647.0115 CLIP  
647.0114 CLIP  
647.0113 STRUT DOUBLER  
647.0112 STRUT BRACKET  
647.0111 PANEL  
647.0110 ROOF DOUBLER

QTY  
NEXT ASSY (S)  
646.9500

ORIGINAL DATE (MO-DA-YR) 05-28-09  
DRAWN BY J. BRAYO  
R. FOGANO  
DRAWING APPROVAL P. BRAYO 05-28-09  
CONTRACT NO.

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE:  
1 PLACE DECIMALS ± .01  
2 PLACE DECIMALS ± .005  
ANGLES ± .5°

APICAL INDUSTRIES  
2608 TEMPLE HEIGHTS DR.  
OCEANSIDE, CA. 92056-3512 (760)724-5300

SHEETMETAL

SIZE B 07M26 DWG 1 647.0100 REV A  
SCALE NONE SHEET 1 OF 6

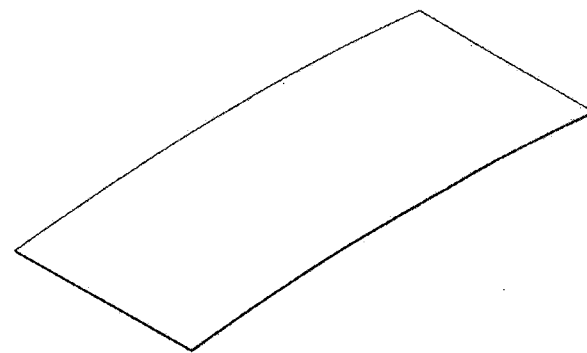
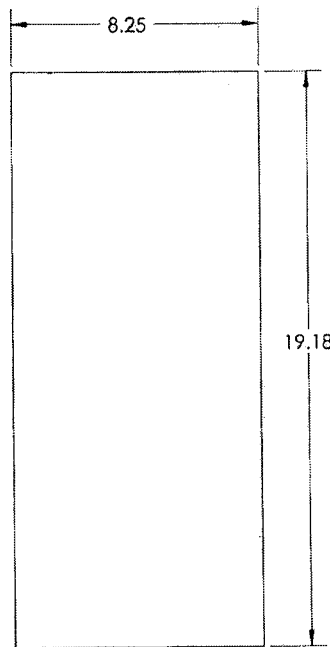
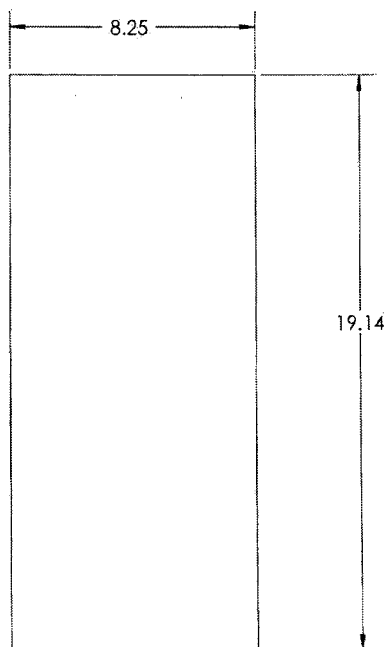
| REVISIONS |                                     |          |           |
|-----------|-------------------------------------|----------|-----------|
| REV.      | DESCRIPTION                         | DATE     | APPROVED  |
|           | LAST PROTOTYPE REVISION: PPS        |          | N/C       |
| N/C       | INITIAL RELEASE                     | 03/28/09 | P. BRAYCO |
| A.        | INCORPORATED ECN 02722, 0564, 00089 | 04/28/11 | P. BRAYCO |

UNINCORPORATED ECN(S)

2000

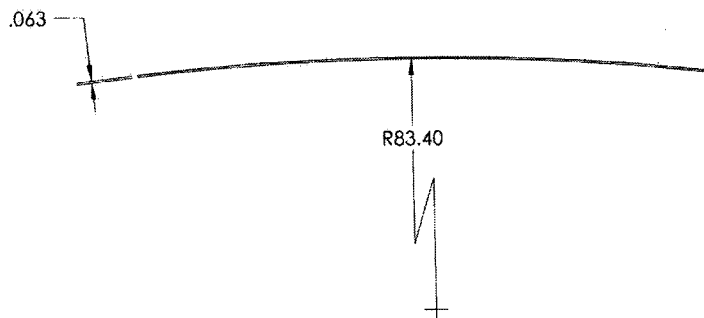
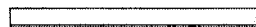
|              |           |                                                                                                                                                         |               |       |       |
|--------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------|-------|
|              |           | 647.0116                                                                                                                                                | DOUBLER       | △     | △     |
|              |           | 647.0115                                                                                                                                                | CLIP          | △     | △     |
|              |           | 647.0114                                                                                                                                                | CLIP          | △     | △     |
|              |           | 647.0113                                                                                                                                                | STRUT DOUBLER | △     | △     |
|              |           | 647.0112                                                                                                                                                | STRUT BRACKET | △     | △     |
|              |           | 647.0111                                                                                                                                                | PANEL         | △     | △     |
|              |           | 647.0110                                                                                                                                                | ROOF DOUBLER  | △     | △     |
|              | FIND #    | PART #                                                                                                                                                  | DESCRIPTION   | MAT'L | SPEC. |
| QTY          |           |                                                                                                                                                         | PARTS LIST    |       |       |
| NEXT ASSY IS |           | APICAL INDUSTRIES                                                                                                                                       |               |       |       |
| 646.9500     |           | 2608 TEMPLE HEIGHTS DR.<br>OCEANSIDE, CA. 92056-3512 (760)724-5300                                                                                      |               |       |       |
|              |           | SHEETMETAL                                                                                                                                              |               |       |       |
|              |           | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>1. PLACE DECIMALS: ± .01<br>2. PLACE DECIMALS: ± .005<br>3. INCHES: ± .005 |               |       |       |
| SIZE         | CAGE CODE | DWG. NO.                                                                                                                                                | REV. A        |       |       |
| B            | 07M36     | 647.0100                                                                                                                                                |               |       |       |
| SCALE: NONE  |           | 1 SHEET 1 OF 6                                                                                                                                          |               |       |       |

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647.0111

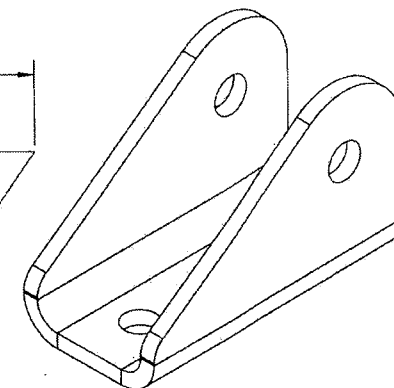
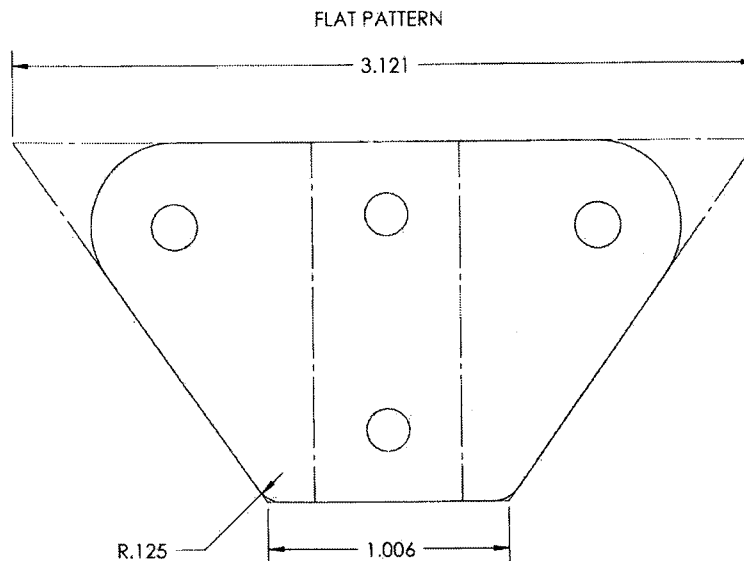
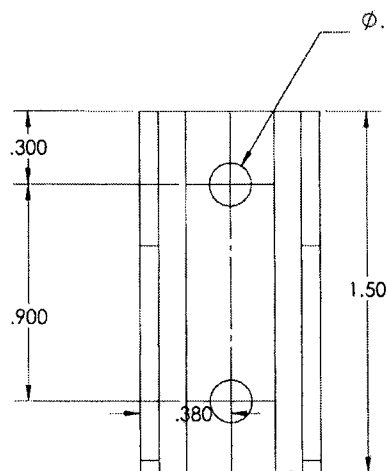
FLAT PATTERN



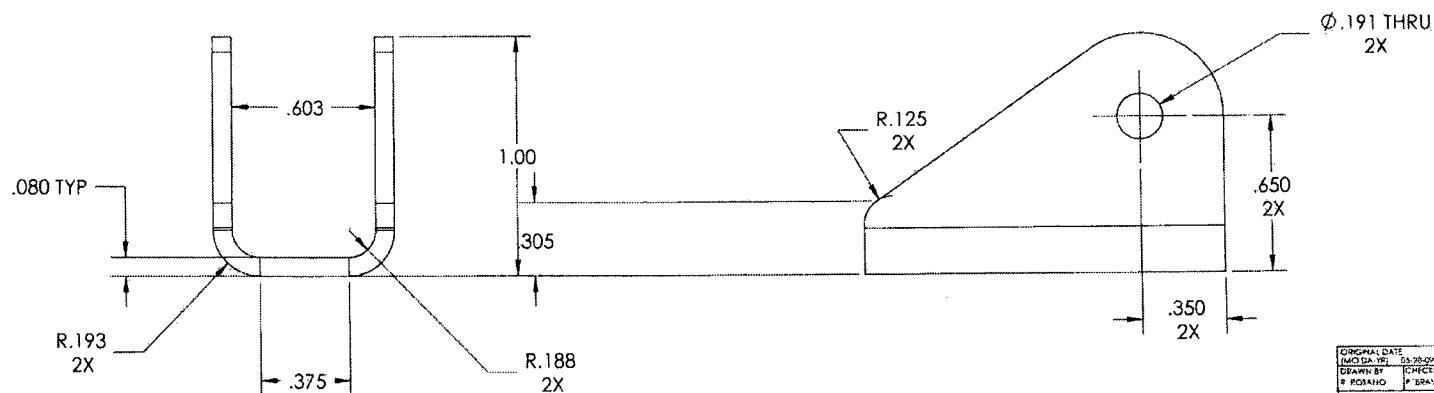
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|------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------|--------|
| ORIGINAL DATE: 05/28/08<br>(MO-DATE) 05/28/08                                                                                                  |  | APICAL INDUSTRIES                        |        |
| DRAWN BY: J. BAYO                                                                                                                              |  | 2608 TEMPLE HEIGHTS DR.                  |        |
| CHECKED BY: P. BAYO                                                                                                                            |  | OCEANSIDE, CA. 92056-3512 (760) 724-5300 |        |
| DRAWING APPROVAL: P. BAYO                                                                                                                      |  | SHEETMETAL                               |        |
| CONTRACT NO:                                                                                                                                   |  | DWG. NO. 647.0100                        |        |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>2 PLACE DECIMALS ± .01<br>3 PLACE DECIMALS ± .005<br>ANGLES ± .5° |  | SHEET 2 OF 6                             | REV. A |

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| REVISIONS |             |      |          |
|-----------|-------------|------|----------|
| REV.      | DESCRIPTION | DATE | APPROVED |
|           |             |      |          |
|           |             |      |          |



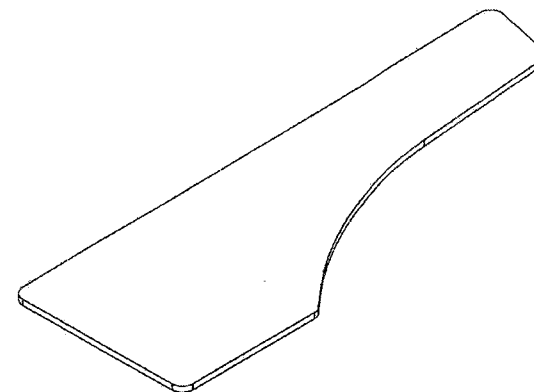
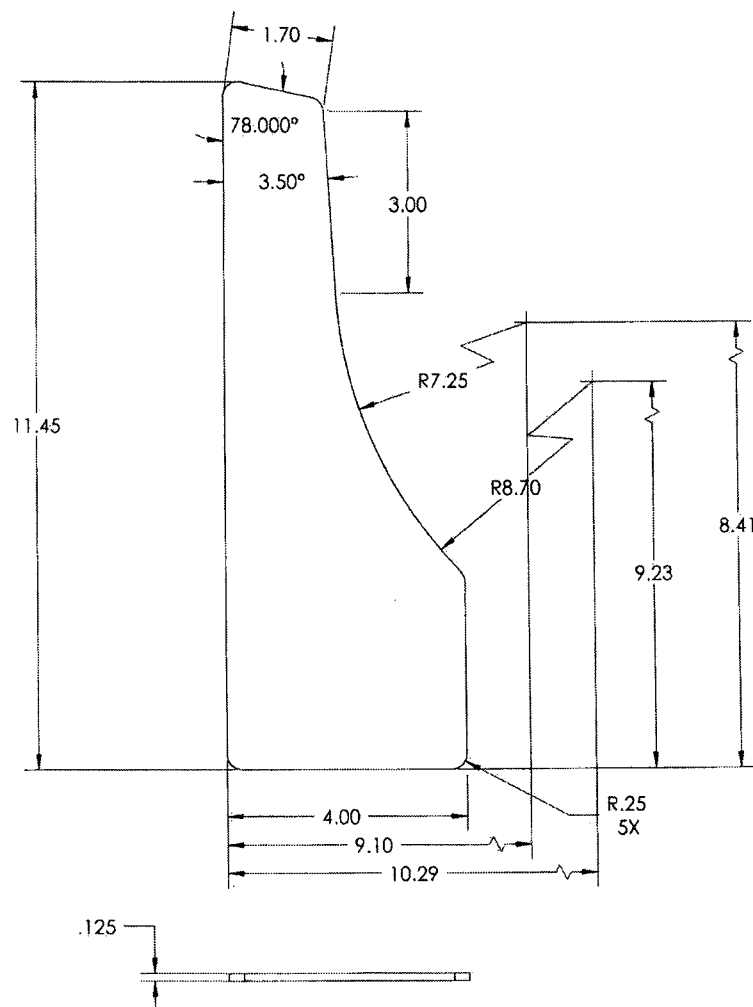
647.0112



|                                                                                                                                                |  |                                         |                  |
|------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------|------------------|
| ORIGINAL DATE<br>1/10/01 11:00 AM                                                                                                              |  | APICAL INDUSTRIES                       |                  |
| DRAWN BY<br>R. ROSARIO                                                                                                                         |  | 2608 TEMPLE HEIGHTS DR.                 |                  |
| DRAWING APPROVAL<br>P. BRAVO                                                                                                                   |  | OCEANSIDE, CA. 92056-3512 (760)724-5300 |                  |
| CONTRACT NO.                                                                                                                                   |  | SHEETMETAL                              |                  |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>2 PLACE DECIMALS ± .01<br>3 PLACE DECIMALS ± .005<br>ANGLES ± .5° |  | SIZE 1:1/2" X 11" 1/2"                  | DWG NO. 647.0100 |
| SCALE NONE                                                                                                                                     |  | REV A                                   | SHEET 3 OF 6     |

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| REVISIONS |             |      |          |
|-----------|-------------|------|----------|
| REV.      | DESCRIPTION | DATE | APPROVED |
|           |             |      |          |
|           |             |      |          |

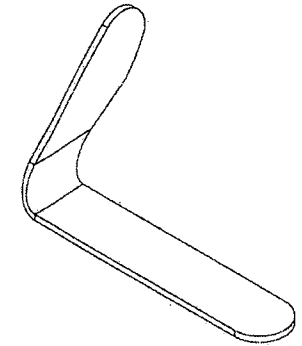


647.0113

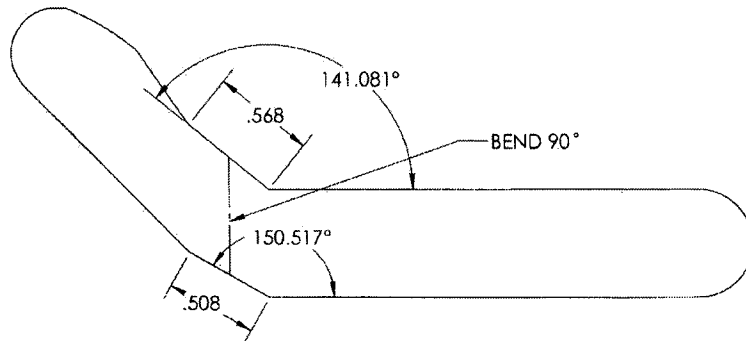
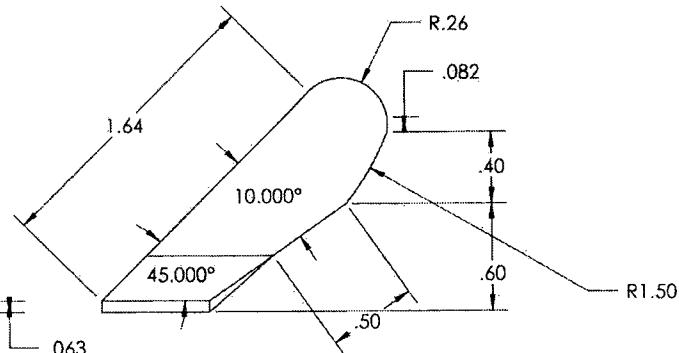
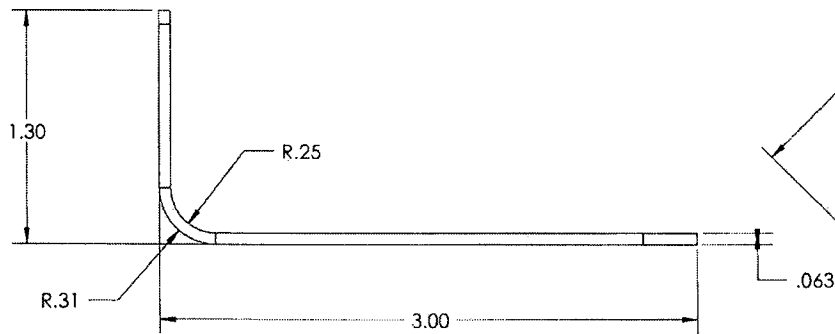
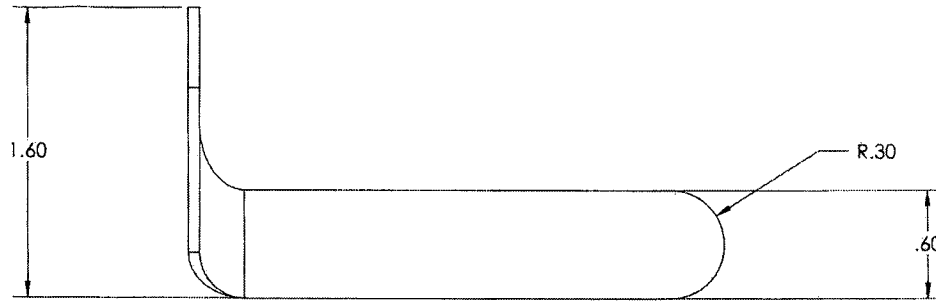
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|------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------|----------|
| ORIGINAL DATE<br>(MM/DD/YY) 05/28/09                                                                                                           |  | APICAL INDUSTRIES                        |          |
| DRAWN BY: C. RICHER                                                                                                                            |  | 2608 TEMPLE HEIGHTS DR.                  |          |
| P. ROSANO P. BRAVO                                                                                                                             |  | OCEANSIDE, CA. 92056-3512 (760) 724-5300 |          |
| DRAWING APPROVAL<br>P. BRAVO                                                                                                                   |  | SHEETMETAL                               |          |
| 05/28/09                                                                                                                                       |  |                                          |          |
| CONTRACT NO.:                                                                                                                                  |  |                                          |          |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>2 PLACE DECIMALS ± .01<br>3 PLACE DECIMALS ± .001<br>ANGLES ± .5° |  | SHEET CODE<br>B 07MM/6                   | REV<br>A |
| DWG. NO. 647.010J                                                                                                                              |  | SCALE NONE SHEET 4 OF 6                  |          |

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| REVISIONS |             |      |          |
|-----------|-------------|------|----------|
| REV.      | DESCRIPTION | DATE | APPROVED |
|           |             |      |          |
|           |             |      |          |



647.0114 SHOWN  
647.0115 OPPOSITE



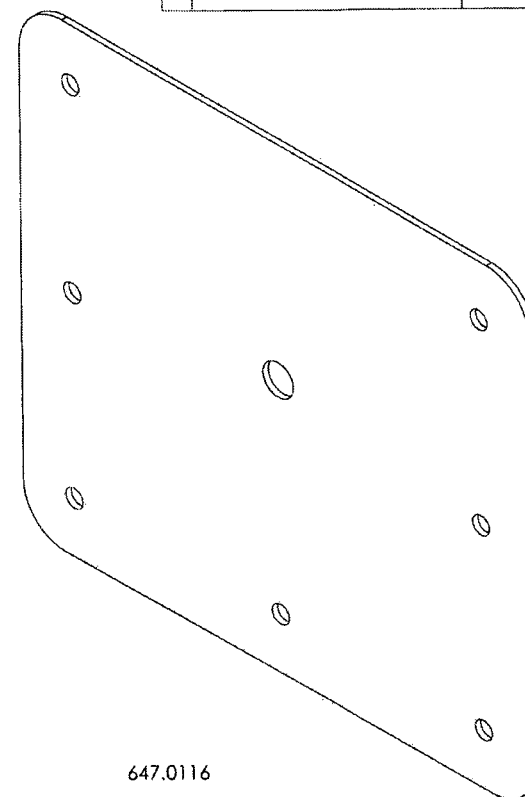
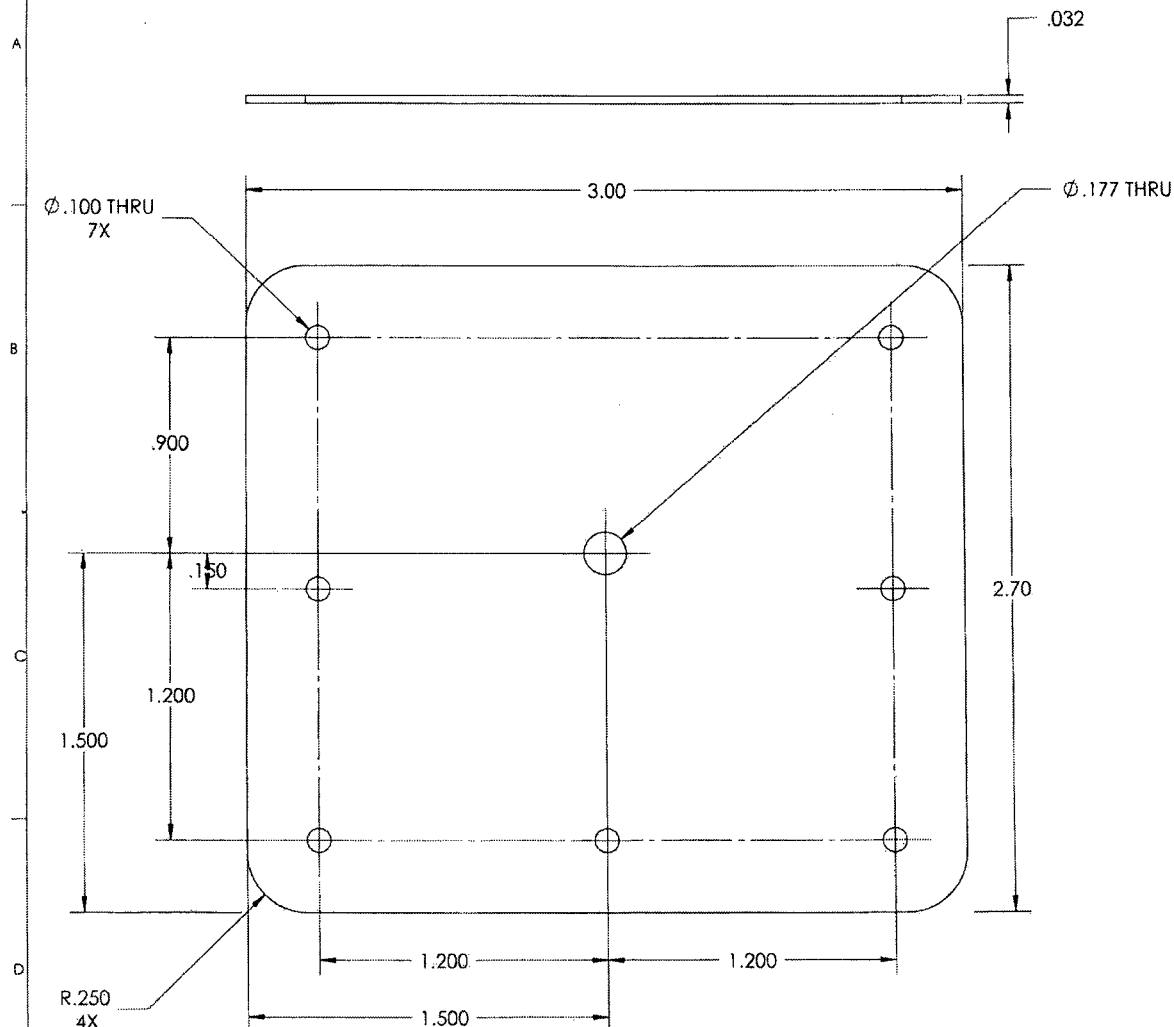
FLAT PATTERN

|                                                                                                                     |  |                                                                    |        |
|---------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------|--------|
| ORIGINAL DATE<br>MODIFIED 05-28-08                                                                                  |  | APICAL INDUSTRIES                                                  |        |
| DRAWN BY<br># ROJAND P. BRAVO                                                                                       |  | 2608 TEMPLE HEIGHTS DR.<br>OCEANSIDE, CA. 92056-3512 (760)724-5300 |        |
| DRAWING APPROVAL<br>P. BRAVO                                                                                        |  | SHEETMETAL                                                         |        |
| CONTRACT NO.                                                                                                        |  | DWG. NO. 647.0100                                                  |        |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>2 PLACE DECIMALS ± .01<br>ANGLES ± .5° |  | REV. B 07/02/06                                                    | REV. A |
| SCALE NONE                                                                                                          |  | SHEET 5 OF 6                                                       |        |



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| REVISIONS |             |      |          |
|-----------|-------------|------|----------|
| REV       | DESCRIPTION | DATE | APPROVED |
|           |             |      |          |
|           |             |      |          |



647.0116

|                                                                                                                                                |              |                                                                    |          |
|------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------|----------|
| ORIGINAL DATE<br>(NO. DA-78) 03-28-07                                                                                                          |              | APICAL INDUSTRIES                                                  |          |
| DRAWN BY<br>P. JODIANO P. BEALVEZ                                                                                                              |              | 2608 TEMPLE HEIGHTS DR.<br>OCEANSIDE, CA. 92056-3512 (760)724-5300 |          |
| DRAWING APPROVAL<br>P. BEALVEZ                                                                                                                 |              | SHEETMETAL                                                         |          |
| CONTRACT NO.                                                                                                                                   |              | 647.0100                                                           |          |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>2 PLACE DECIMALS ± .01<br>3 PLACE DECIMALS ± .001<br>ANGLES ± .5° | SIZE<br>6    | CAGE CODE<br>07M16                                                 | REV<br>A |
| SCALE NONE                                                                                                                                     | SHEET 6 OF 6 |                                                                    |          |

FACE

Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

# PURCHASE ORDER

Purchase Order ID **PO27915**

Purchase Order Date 3/27/2015

PO Print Date 4/1/2015

Page Number 2 of 5

**Order From :**

VC-ATG001

**Ship To :** DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.  
731 INDUSTRIELLE ROAD  
ROCKLAND, ON K4K 1T2  
CANADA

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone**

613-446-4544

**Ship To Contact**

**Ship To Phone**

**Ship Via:**

**Ship Acct:**

VENDOR'S TRUCK

**Buyer**

**Customer POID**

**Customer Tax #**

**Terms**

**Currency**

**FOB**

Chantal Lavoie

10127-2607

Net 30

CAD

FCA - (Free Carrier)

|   |        |                                     |           |      |        |         |
|---|--------|-------------------------------------|-----------|------|--------|---------|
| 3 | 129696 | 646.3812 GUSSET<br>BRACKET REV. N/C | 4/13/2015 | 2.00 | \$6.10 | \$12.20 |
|---|--------|-------------------------------------|-----------|------|--------|---------|

Yes

4/13/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2  
PRIME: AS PER IAW MIL-P-23377J TYPE I, CLASS N

**Line Total: \$12.20**

|   |        |                                 |           |       |         |          |
|---|--------|---------------------------------|-----------|-------|---------|----------|
| 4 | 116709 | 647.0110 ROOF<br>DOUBLER REV. A | 4/13/2015 | 12.00 | \$43.00 | \$516.00 |
|---|--------|---------------------------------|-----------|-------|---------|----------|

Yes

4/13/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2  
PRIME: AS PER IAW MIL-P-23377J TYPE I, CLASS N

**Line Total: \$516.00**

|   |        |                       |           |       |         |          |
|---|--------|-----------------------|-----------|-------|---------|----------|
| 5 | 116830 | 647.0111 PANEL REV. A | 4/13/2015 | 15.00 | \$39.25 | \$588.75 |
|---|--------|-----------------------|-----------|-------|---------|----------|

Yes

4/13/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2  
PRIME: AS PER IAW MIL-P-23377J TYPE I, CLASS N

*SP15-0114*

**Note:**

4/1/2015



A.T.G. Industries Inc.  
731, rue Industrielle Rd.  
PLATING DEPARTMENT  
Rockland, On K4K 1T2  
Canada  
Ph: (613) 446-4544  
Fax: (613) 446-4556

### Pack List

Number: 63643

Date: 10-Apr-15

#### To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

#### Ship To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

| Terms    |                                                                                                                                                                                                     | Ship Via |       |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|
|          |                                                                                                                                                                                                     |          |       |
| Quantity | Description                                                                                                                                                                                         |          |       |
| 8<br>ea  | Part: 646.3012<br>LOWER GUIDE<br>HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2<br><br>PRIME AS PER MIL-P-23377J TYPE I CLASS N<br>PRIMER IS SUPPLY BY THE CUSTOMER<br>Job: 20150267 PO: PO27915    | Rev: N/C | Line: |
| 9<br>ea  | Part: 646.3715<br>STRUT DOUBLER<br>HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2<br><br>PRIME AS PER MIL-P-23377J TYPE I CLASS N<br>PRIMER IS SUPPLY BY THE CUSTOMER<br>Job: 20150268 PO: PO27915  | Rev: A   | Line: |
| 2<br>ea  | Part: 646.3812<br>GUSSET BRACKET<br>HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2<br><br>PRIME AS PER MIL-P-23377J TYPE I CLASS N<br>PRIMER IS SUPPLY BY THE CUSTOMER<br>Job: 20150269 PO: PO27915 | Rev:     | Line: |
| 12<br>ea | Part: 647.0110<br>ROOF DOUBLER<br>HARD ANODIZE BLACK TYPE III CLASS 2<br><br>PRIME PER MIL-P-23377J TYPE I CLASS N<br>PAINT IS SUPPLIED BY CUSTOMER<br>Job: 20150270 PO: PO27915                    | Rev: A   | Line: |
| 15<br>ea | Part: 647.0111<br>PANEL<br>HARD ANODIZE BLACK TYPE III CLASS 2<br><br>PRIME PER MIL-P-23377J TYPE I CLASS N                                                                                         | Rev: A   | Line: |

SP15-04-14



A.T.G. Industries Inc.  
731, rue Industrielle Rd.  
PLATING DEPARTMENT  
Rockland, On K4K 1T2  
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

### Pack List

Number: 63643

Date: 10-Apr-15

#### To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

#### Ship To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

| Terms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Ship Via                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <table border="1"><thead><tr><th>Quantity</th><th>Description</th></tr></thead><tbody><tr><td></td><td><p>A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.</p><p>ISO 9001 : 2008 REGISTERED<br/>ATG SALES-2010 TERMS APPLY</p><p>DATE : <u>10/4/15</u></p><p>CERTIFIED SIGNATURE : <u></u></p><p>RECEIVER SIGNATURE : <u>SP 15-04-14</u></p></td></tr></tbody></table> |                                                                                                                                                                                                                                                                                                                                                                                                                                                | Quantity | Description |  | <p>A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.</p> <p>ISO 9001 : 2008 REGISTERED<br/>ATG SALES-2010 TERMS APPLY</p> <p>DATE : <u>10/4/15</u></p> <p>CERTIFIED SIGNATURE : <u></u></p> <p>RECEIVER SIGNATURE : <u>SP 15-04-14</u></p> |
| Quantity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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